02/07

#3

OIPE

RAW SEQUENCE LISTING   DATE: 02/08/2002
PATENT APPLICATION: US/09/977,577   TIME: 13:59:40

Input Set : A:\MOESTRUP1A.txt
Output Set: N:\CRF3\02082002\I977577.raw

p.5

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  3 <110> APPLICANT: MOESTRUP, Soren
  4        MOLLER, Holger J.
  6 <120> TITLE OF INVENTION: THE FUNCTION OF A HAPTOGLOBIN-HAEMOGLOBIN RECEPTOR AND THE
USES THEREOF
  8 <130> FILE REFERENCE: MOESTRUP-1A
 10 <140> CURRENT APPLICATION NUMBER: 09/977,577
 11 <141> CURRENT FILING DATE: 2001-10-16
 13 <150> PRIOR APPLICATION NUMBER: US 60/270,120
 14 <151> PRIOR FILING DATE: 2001-02-22
 16 <150> PRIOR APPLICATION NUMBER: DK PA 2001 00039
 17 <151> PRIOR FILING DATE: 2001-01-11
 19 <150> PRIOR APPLICATION NUMBER: DK PA 2000 01543
 20 <151> PRIOR FILING DATE: 2000-10-16
 22 <160> NUMBER OF SEQ ID NOS: 25
 24 <170> SOFTWARE: PatentIn version 3.1
 26 <210> SEQ ID NO: 1
 27 <211> LENGTH: 347
 28 <212> TYPE: PRT
 29 <213> ORGANISM: Homo sapiens
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 37 Phe Ala Val Asp Ser Gly Asn Asp Val Thr Asp Ile Ala Asp Asp Gly
 38              20                  25                  30
 41 Cys Pro Lys Pro Pro Glu Ile Ala His Gly Tyr Val Glu His Ser Val
 42          35                  40                  45
 45 Arg Tyr Gln Cys Lys Asn Tyr Tyr Lys Leu Arg Thr Glu Gly Asp Gly
 46      50                  55                  60
 49 Val Tyr Thr Leu Asn Asn Glu Lys Gln Trp Ile Asn Lys Ala Val Gly
 50 65                  70                  75                  80
 53 Asp Lys Leu Pro Glu Cys Glu Ala Val Cys Gly Lys Pro Lys Asn Pro
 54              85                  90                  95
 57 Ala Asn Pro Val Gln Arg Ile Leu Gly Gly His Leu Asp Ala Lys Gly
 58              100                 105                 110
 61 Ser Phe Pro Trp Gln Ala Lys Met Val Ser His His Asn Leu Thr Thr
 62          115                 120                 125
 65 Gly Ala Thr Leu Ile Asn Glu Gln Trp Leu Leu Thr Thr Ala Lys Asn
 66      130                 135                 140
 69 Leu Phe Leu Asn His Ser Glu Asn Ala Thr Ala Lys Asp Ile Ala Pro
 70 145                 150                 155                 160
 73 Thr Leu Thr Leu Tyr Val Gly Lys Lys Gln Leu Val Glu Ile Glu Lys
 74              165                 170                 175
 77 Val Val Leu His Pro Asn Tyr Ser Gln Val Asp Ile Gly Leu Ile Lys
 78              180                 185                 190
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                    RAW SEQUENCE LISTING              DATE: 02/08/2002
                    PATENT APPLICATION:  US/09/977,577  TIME: 13:59:40

                    Input Set : A:\MOESTRUP1A.txt
                    Output Set: N:\CRF3\02082002\I977577.raw

81 Leu Lys Gln Lys Val Ser Val Asn Glu Arg Val Met Pro Ile Cys Leu
82          195               200               205
85 Pro Ser Lys Asp Tyr Ala Glu Val Gly Arg Val Gly Tyr Val Ser Gly
86      210               215               220
89 Trp Gly Arg Asn Ala Asn Phe Lys Phe Thr Asp His Leu Lys Tyr Val
90 225               230               235               240
93 Met Leu Pro Val Ala Asp Gln Asp Gln Cys Ile Arg His Tyr Glu Gly
94               245               250               255
97 Ser Thr Val Pro Glu Lys Lys Thr Pro Lys Ser Pro Val Gly Val Gln
98          260               265               270
101 Pro Ile Leu Asn Glu His Thr Phe Cys Ala Gly Met Ser Lys Tyr Gln
102          275               280               285
105 Glu Asp Thr Cys Tyr Gly Asp Ala Gly Ser Ala Phe Ala Val His Asp
106      290               295               300
109 Leu Glu Glu Asp Thr Trp Tyr Ala Thr Gly Ile Leu Ser Phe Asp Lys
110 305               310               315               320
113 Ser Cys Ala Val Ala Glu Tyr Gly Val Tyr Val Lys Val Thr Ser Ile
114               325               330               335
117 Gln Asp Trp Val Gln Lys Thr Ile Ala Glu Asn
118          340               345

121 <210> SEQ ID NO: 2
122 <211> LENGTH: 406
123 <212> TYPE: PRT
124 <213> ORGANISM: Homo sapiens

126 <400> SEQUENCE: 2
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132 Phe Ala Val Asp Ser Gly Asn Asp Val Thr Asp Ile Ala Asp Asp Gly
133          20               25               30
136 Cys Pro Lys Pro Pro Glu Ile Ala His Gly Tyr Val Glu His Ser Val
137          35               40               45
140 Arg Tyr Gln Cys Lys Asn Tyr Tyr Lys Leu Arg Thr Glu Gly Asp Gly
141      50               55               60
144 Val Tyr Thr Leu Asn Asp Lys Lys Gln Trp Ile Asn Lys Ala Val Gly
145 65               70               75               80
148 Asp Lys Leu Pro Glu Cys Glu Ala Asp Asp Gly Cys Pro Lys Pro Pro
149               85               90               95
152 Glu Ile Ala His Gly Tyr Val Glu His Ser Val Arg Tyr Gln Cys Lys
153          100               105               110
156 Asn Tyr Tyr Lys Leu Arg Thr Glu Gly Asp Gly Val Tyr Thr Leu Asn
157      115               120               125
160 Asn Glu Lys Gln Trp Ile Asn Lys Ala Val Gly Asp Lys Leu Pro Glu
161      130               135               140
164 Cys Glu Ala Val Gly Lys Pro Lys Asn Pro Ala Asn Pro Val Gln
165 145               150               155               160
168 Arg Ile Leu Gly Gly His Leu Asp Ala Lys Gly Ser Phe Pro Trp Gln
169               165               170               175
172 Ala Lys Met Val Ser His His Asn Leu Thr Thr Gly Ala Thr Leu Ile
173               180               185               190
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RAW SEQUENCE LISTING                          DATE: 02/08/2002
PATENT APPLICATION:   US/09/977,577           TIME: 13:59:40

        Input Set : A:\MOESTRUP1A.txt
        Output Set: N:\CRF3\02082002\I977577.raw
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176 Asn Glu Gln Trp Leu Leu Thr Thr Ala Lys Asn Leu Phe Leu Asn His
177         195             200             205
180 Ser Glu Asn Ala Thr Ala Lys Asp Ile Ala Pro Thr Leu Thr Leu Tyr
181     210             215             220
184 Val Gly Lys Lys Gln Leu Val Glu Ile Glu Lys Val Val Leu His Pro
185 225             230             235             240
188 Asn Tyr Ser Gln Val Asp Ile Gly Leu Ile Lys Leu Lys Gln Lys Val
189             245             250             255
192 Ser Val Asn Glu Arg Val Met Pro Ile Cys Leu Pro Ser Lys Asp Tyr
193         260             265             270
196 Ala Glu Val Gly Arg Val Gly Tyr Val Ser Gly Trp Gly Arg Asn Ala
197     275             280             285
200 Asn Phe Lys Phe Thr Asp His Leu Lys Tyr Val Met Leu Pro Val Ala
201 290             295             300
204 Asp Gln Asp Gln Cys Ile Arg His Tyr Glu Gly Ser Thr Val Pro Glu
205 305             310             315             320
208 Lys Lys Thr Pro Lys Ser Pro Val Gly Val Gln Pro Ile Leu Asn Glu
209             325             330             335
212 His Thr Phe Cys Ala Gly Met Ser Lys Tyr Gln Glu Asp Thr Cys Tyr
213         340             345             350
216 Gly Asp Ala Gly Ser Ala Phe Ala Val His Asp Leu Glu Glu Asp Thr
217         355             360             365
220 Trp Tyr Ala Thr Gly Ile Leu Ser Phe Asp Lys Ser Cys Ala Val Ala
221     370             375             380
224 Glu Tyr Gly Val Tyr Tyr Lys Val Thr Ser Ile Gln Asp Trp Val Gln
225 385             390             395             400
228 Lys Thr Ile Ala Glu Asn
229             405
232 <210> SEQ ID NO: 3
233 <211> LENGTH: 347
234 <212> TYPE: PRT
235 <213> ORGANISM: Ateles geoffroyi
237 <400> SEQUENCE: 3
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243 Phe Ala Val Asp Ser Gly Asn Asp Val Thr Asp Ile Ala Asp Asp Gly
244             20              25              30
247 Cys Pro Lys Pro Pro Glu Ile Ala Asn Gly Tyr Val Glu His Leu Val
248         35              40              45
251 Arg Tyr Gln Cys Lys Lys Tyr Tyr Arg Leu Arg Thr Glu Gly Asp Gly
252 50              55              60
255 Val Tyr Thr Leu Asn Asn Glu Lys Gln Trp Thr Asn Lys Ala Val Gly
256 65              70              75              80
259 Asp Lys Leu Pro Glu Cys Glu Ala Val Cys Gly Lys Pro Lys Asn Pro
260             85              90              95
263 Ala Asn Pro Val Gln Arg Ile Leu Gly Gly His Leu Asp Ala Lys Gly
264             100             105             110
267 Ser Phe Pro Trp Gln Ala Lys Met Val Ser Arg His Asn Leu Thr Thr
268         115             120             125
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```
271 Gly Ala Thr Leu Ile Asn Glu Gln Trp Leu Leu Thr Thr Ala Lys Asn
272     130                 135                 140
275 Leu Phe Leu Asn His Ser Glu Asn Ala Thr Ala Lys Asp Ile Ala Pro
276 145                 150                 155                 160
279 Thr Leu Thr Leu Tyr Val Gly Lys Asn Gln Leu Val Glu Ile Glu Lys
280                 165                 170                 175
283 Val Val Leu Tyr Pro Asn Tyr Ser Gln Val Asp Ile Gly Leu Ile Lys
284             180                 185                 190
287 Leu Lys Asp Lys Val Pro Val Asn Glu Arg Val Met Pro Ile Cys Leu
288     195                 200                 205
291 Pro Ser Lys Asp Tyr Ala Glu Val Gly Arg Val Gly Tyr Val Ser Gly
292     210                 215                 220
295 Trp Gly Arg Asn Ala Asn Phe Lys Phe Thr Asp His Leu Lys Tyr Val
296 225                 230                 235                 240
299 Met Leu Pro Val Ala Asp Gln Tyr Gln Cys Val Lys His Tyr Glu Gly
300                 245                 250                 255
303 Ser Thr Val Pro Glu Lys Lys Thr Pro Lys Ser Pro Val Gly Gln Gln
304     260                 265                 270
307 Pro Ile Leu Asn Glu His Thr Phe Cys Ala Gly Met Ser Lys Tyr Gln
308     275                 280                 285
311 Glu Asp Thr Cys Tyr Gly Asp Ala Gly Ser Ala Phe Ala Val His Asp
312     290                 295                 300
315 Leu Glu Glu Asp Thr Trp Tyr Ala Ala Gly Ile Leu Ser Phe Asp Lys
316 305                 310                 315                 320
319 Ser Cys Gly Val Ala Glu Tyr Gly Val Tyr Val Lys Ala Thr Ser Ile
320                 325                 330                 335
323 Gln Asp Trp Val Gln Lys Thr Ile Ala Glu Asn
324     340                 345
327 <210> SEQ ID NO: 4
328 <211> LENGTH: 347
329 <212> TYPE: PRT
330 <213> ORGANISM: Mus caroli
332 <400> SEQUENCE: 4
334 Met Arg Ala Leu Gly Ala Val Val Thr Leu Leu Leu Trp Gly Gln Leu
335 1               5                   10                  15
338 Phe Ala Val Glu Leu Gly Asn Asp Asp Ala Met Asp Phe Glu Asp Ser
339             20                  25                  30
342 Cys Pro Lys Pro Pro Glu Ile Ala Asn Gly Tyr Val Glu His Leu Val
343     35                  40                  45
346 Arg Tyr Arg Cys Arg Gln Phe Tyr Arg Leu Arg Ala Glu Gly Asp Gly
347 50                  55                  60
350 Val Tyr Thr Leu Asn Asp Glu Lys Gln Trp Met Asn Thr Val Ala Gly
351 65                  70                  75                  80
354 Glu Lys Leu Pro Glu Cys Glu Ala Val Cys Gly Lys Pro Lys His Pro
355                 85                  90                  95
358 Val Asp Gln Val Gln Arg Ile Ile Gly Gly Ser Met Asp Ala Lys Gly
359                 100                 105                 110
362 Ser Phe Pro Trp Gln Ala Lys Met Ile Ser Arg His Gly Leu Thr Thr
363     115                 120                 125
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Input Set : A:\MOESTRUP1A.txt
Output Set: N:\CRF3\02082002\I977577.raw

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366 Gly Ala Thr Leu Ile Ser Asp Gln Trp Leu Leu Thr Thr Ala Lys Asn
367     130                 135                 140
370 Leu Phe Leu Asn His Ser Glu Thr Ala Ser Gly Lys Asp Ile Ala Pro
371 145                 150                 155                 160
374 Thr Leu Thr Leu Tyr Val Gly Lys Asn Gln Leu Val Glu Ile Glu Lys
375                 165                 170                 175
378 Val Ile Leu His Pro Asn His Ser Val Val Asp Ile Gly Leu Ile Lys
379                 180                 185                 190
382 Leu Lys Gln Arg Val Leu Val Thr Glu Arg Val Met Pro Ile Cys Leu
383             195                 200                 205
386 Pro Ser Lys Asp Tyr Val Ala Pro Gly Arg Val Gly Tyr Val Ser Gly
387     210                 215                 220
390 Trp Gly Arg Asn Gln Asp Phe Arg Phe Thr Asp Arg Leu Lys Tyr Val
391 225                 230                 235                 240
394 Met Leu Pro Val Ala Asp Gln Asp Lys Cys Val Val His Tyr Glu Lys
395                 245                 250                 255
398 Ser Thr Val Pro Glu Lys Lys Asn Phe Thr Ser Pro Val Gly Val Gln
399                 260                 265                 270
402 Pro Ile Leu Asn Glu His Thr Phe Cys Ala Gly Leu Thr Lys Tyr Glu
403     275                 280                 285
406 Glu Asp Thr Cys Tyr Gly Asp Ala Gly Ser Ala Phe Ala Ile His Asp
407     290                 295                 300
410 Met Glu Glu Asp Thr Trp Tyr Ala Ala Gly Ile Leu Ser Phe Asp Lys
411 305                 310                 315                 320
414 Ser Cys Ala Val Ala Glu Tyr Gly Val Tyr Val Arg Ala Thr Asp Leu
415                 325                 330                 335
418 Lys Asp Trp Val Gln Glu Thr Met Ala Lys Asn
419                 340                 345
422 <210> SEQ ID NO: 5
423 <211> LENGTH: 347
424 <212> TYPE: PRT
425 <213> ORGANISM: Mus musculus
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430 1               5                   10                  15
433 Phe Ala Val Glu Leu Gly Asn Asp Ala Met Asp Phe Glu Asp Asp Ser
434             20                  25                  30
437 Cys Pro Lys Pro Pro Glu Ile Ala Asn Gly Tyr Val Glu His Leu Val
438         35                  40                  45
441 Arg Tyr Arg Cys Arg Gln Phe Tyr Arg Leu Arg Ala Glu Gly Asp Gly
442     50                  55                  60
445 Val Tyr Thr Leu Asn Asp Glu Lys Gln Trp Val Asn Thr Val Ala Gly
446 65                  70                  75                  80
449 Glu Lys Leu Pro Glu Cys Glu Ala Val Cys Gly Lys Pro Lys His Pro
450             85                  90                  95
453 Val Asp Gln Val Gln Arg Ile Ile Gly Gly Ser Met Asp Ala Lys Gly
454             100                 105                 110
457 Ser Phe Pro Trp Gln Ala Lys Met Ile Ser Arg His Gly Leu Thr Thr
458     115                 120                 125
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VERIFICATION SUMMARY
PATENT APPLICATION: US/09/977,577

DATE: 02/08/2002
TIME: 13:59:41

Input Set : **A:\MOESTRUP1A.txt**
Output Set: **N:\CRF3\02082002\I977577.raw**

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L:2417 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:21